

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
3 March 2005 (03.03.2005)

PCT

(10) International Publication Number
WO 2005/019651 A1

(51) International Patent Classification⁷: **F04C 18/02,**
23/00

(21) International Application Number:
PCT/GB2004/003429

(22) International Filing Date: 10 August 2004 (10.08.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
0319513.8 19 August 2003 (19.08.2003) GB

(71) Applicant (for all designated States except US): **THE
BOC GROUP PLC** (GB/GB); Chertsey Road, Windle-
sham, Surrey GU20 6HJ (GB).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **GOODWIN, David,**

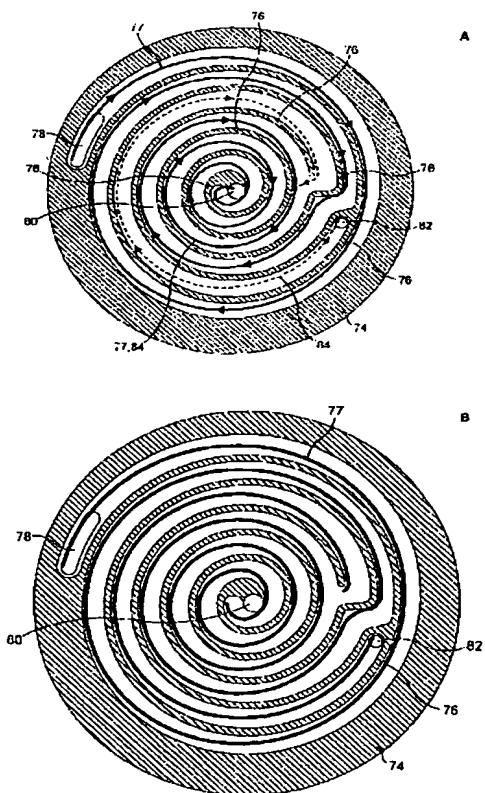
John [GB/GB]; BOC Edwards, Fleming Way, Crawley,
West Sussex RH10 9NH (GB). **SAUNDERS, Alan,**
John [GB/GB]; BOC Edwards, York Road, Burgess Hill,
West Sussex RH15 9TT (GB). **MAY, Philip, Lawrence**
[GB/GB]; BOC Edwards, Fleming Way, Crawley, West
Sussex RH10 9NH (GB). **HUNTLEY, Graeme** [GB/GB];
BOC Edwards, Kenn Business Park, Kenn Road, Cleve-
don, North Somerset BS21 6TH (GB).

(74) Agent: **BOOTH, Andrew, Steven;** The BOC Group Plc,
Chertsey Road, Windlesham, Surrey GU20 6HJ (GB).

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,

[Continued on next page]

(54) Title: **SCROLL COMPRESSOR MULTIPLE ISOLATED INLET PORTS**



(57) Abstract: The present invention is concerned with a scroll wall ar-
rangement for a scroll compressor. The scroll wall arrangement com-
prises a fixed scroll having fixed scroll walls and an orbiting scroll hav-
ing orbiting scroll wall. Scroll wall arrangement has an inlet at a radially
outer portion thereof and an outlet at a radially central portion thereof. A
first flow path is defined by the orbiting and fixed scroll walls and extends
from the inlet to the outlet, gas entering the arrangement through inlet at
a first pressure and exhausting through outlet at a second pressure higher
than the first pressure. Scroll wall arrangement comprises a second inlet
through which gas can enter at a third pressure and follow a second fluid
path where it is exhausted through the outlet at the second pressure. Two
flow paths are thus provided having respective inlets. The third pressure
at which gas enters through inlet is different from the first pressure, and
lower than the second pressure. Accordingly, the inlets can pump gas at
different pressures.

WO 2005/019651 A1

BEST AVAILABLE COPY



TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(84) **Designated States** (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

Y